

FARM REPORT



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FROM THE PRESIDENT'S DESK: OLD FRIENDS

Oliver Wendell Holmes famously wrote that “there is no friend like an old friend...” That is true for humans, and it appears to be just as true for dairy cows. A recently published paper from Europe explored whether familiar pen mates helped newly fresh cows settle into the milking group after calving (2020. Appl. Anim. Behav. Sci. 229:105033).

In this study the researchers evaluated familiarity reaching back to birth and cows that had grown up together vs. more recent familiarity where cows had overlapped during the dry period. Specifically, long-term familiarity was defined as cows that had been born within 90 days of each other and had grown up together for about 1.5 years in close physical proximity. In contrast, recently familiar cows had just met when they shared 1/3 or more of their dry period.

Cows like consistency in their management environment, but the transition period consists of change, change, and more change. Regrouping of animals is common and can lead to excessive social turmoil unless steps are taken to mitigate the negative social impacts of pen moves. Lying time is often a key to good animal welfare and it can be greatly reduced when cows are regrouped. In this study, lying time and whether the cows lay down together was monitored. Synchronicity is the term used to describe the pattern of cows lying

together, and under natural conditions lying behavior is highly synchronized in dairy cattle. When management interferes with this natural pattern, the cow’s welfare would presumably be affected.

This research found that recent familiarity during the dry period did not affect lying duration or lying synchronicity in either first-calf heifers or older cows. However, longer term familiarity with pen mates had multiple effects on the cows that differed by parity. For first-calf heifers, presence of long-term familiar cows had two effects which seem at odds. First of all, old acquaintances resulted in more lying synchronicity which indicates that these cows recognized each other and aligned their lying behavior. Other research has also shown that long term familiarity reaching back to early life encourages cows to stay closer to each other. But surprisingly, these same first-calf heifers had less lying time. The authors weren’t sure why, but it may be that the newly introduced heifers tried to be active whenever the familiar animals were active which ultimately reduced their lying time. In other words, they were active when their old acquaintances were active.

For multiparous cows, similar to the first-calf heifers the presence of cows familiar since early life resulted in greater lying synchrony within the pen. This agrees

See **COW FRIENDS**, Page 2

SEED INFORMATION RESOURCES

A recent survey of farmers asked which resource they most rely on for seed information. Not surprisingly, seed dealers were by far the most commonly-mentioned resource, cited by 60% of the respondents. Company representatives came in second at 16%. Therefore, about three-fourths of farmers primarily rely on seed company personnel (dealers, regional reps) for hybrid and variety selection. But missing in this list of resources, which also included magazine articles, other farmers, and “other”, is an important one: The farmer himself. Nobody knows more about how a particular variety or hybrid performed than the farmer who grew the crop. This is particularly true if more than one hybrid was grown in

the same field, even more so if the planting was done with some type of comparison in mind. (We’ve written before about this, suggesting simple ways to make informed decisions about corn hybrid performance.) Now is a good time to think about the performance of your corn hybrids (other crops as well) since you’re probably just wound up 2020 harvest so the information should be fresh in your mind.

So rely on your own experience, but seed dealers are still an excellent source of information, especially those who have taken advantage of company-managed variety trials and comparisons. When I was managing the Miner Institute crop

operation, we relied on the results of university trials and seed dealer recommendations as well as our own experience. The amount of university trial data available varies from state to state, but competent, informed seed dealers should be available wherever crops are grown. That said, it would be prudent to pay more attention to what the dealers or company reps say about their own seed varieties than any comments they make about competing products. I have little use for dealers — seed or otherwise — who try to promote the products they sell by denigrating those sold by other companies.

— *Ev Thomas*
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COW FRIENDS, Continued from Page 1

with earlier work that found that long-time familiar cows tend to stay closer together within a dynamic pen. A key result was that recently familiar cows (i.e., during the dry period) did not seem to provide any benefit to the newly introduced cows.

Management strategies ought to take advantage of this desire for old familiarities when regrouping cows after calving. This same research group previously observed that long-term familiarity had stronger effects on the intensity of social relationships than recently shared experiences. The time right after calving is a socially challenging time for dairy cows, especially first-calf heifers. Keeping well-acquainted cows together may promote a more stable social structure for the pen. The bottom line seems to be that old friends make the pen a better place to be.

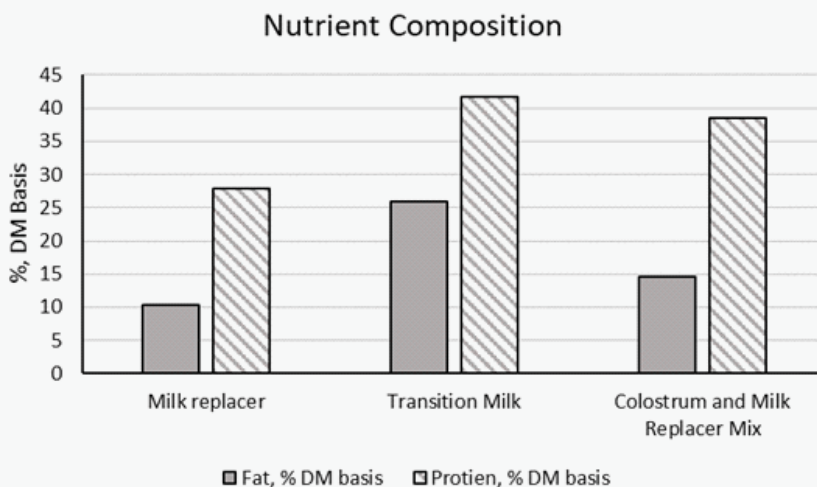
— *Rick Grant*
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NOTABLE QUOTES

- This country will never have a healthy food supply. Because the moment something becomes popular, someone will find a reason why it’s not healthy.
— *Harry Balzer*
- Those who have knowledge, don’t predict. Those who predict, don’t have knowledge.
— *Lau Tzu*
- It’s a funny thing that when a man hasn’t anything on earth to worry about, he goes off and gets married.
— *Robert Frost*

MILK TRANSITION MILK FOR ALL ITS WORTH

In the first three days after calving the milk a cow produces changes in composition as it transitions from colostrum to whole milk. It takes approximately six milkings (or three days) after calving for this transition to occur. Transition milk provides less concentrated nutrients and bioactives than colostrum, but is still more concentrated than whole milk.



A bioactive is defined as a component that has biological effect. This is an umbrella term, but has received quite a bit of buzz as of late. Bioactives in milk or colostrum can include proteins, fatty acids, hormones, etc. that don't necessarily directly contribute to the nutrition of the calf but can interact with the calf, either at a local level (i.e. the gastrointestinal tract) or systemically for more whole-body action once absorbed by the calf. Furthermore, the extra nutrients in colostrum and transition milk can support growth of the calf and the gut to aid in earlier development.

A study from Michigan State University evaluated the effect of feeding either milk replacer, transition milk, or a 50:50 mixture of colostrum replacer and milk replacer from day 2 to 4 of life. The calves were fed two feedings of colostrum replacer for their first two feedings after birth. Then on day 2 of life, calves started being fed the treatments three times a day with 2 quarts (1.89 L) per feeding. The treatments were milk replacer [27.8% CP and 10.3% fat on a DM basis which provided 1.17 Mcal metabolizable energy (ME) per feeding], pasteurized transition milk (25.9% fat, 41.8% protein, and 1.5 g/L IgG as fed, which contained 1.44 Mcal ME per feeding),

or a 50:50 mixture of milk replacer and colostrum replacer which provided 14.6% fat, 38.6% protein, 15 g/L IgG, with 1.28 Mcal of ME per feeding). The figure shows fat and protein provided by the different feeds reported in this study.

The nutrient composition and IgG measured in the transition milk before pasteurization was higher than after pasteurization. This is likely a result of the pasteurization technique used. In this study they pasteurized the transition milk at 161°F (71.7°C) for 15 seconds, which likely denatured some of the proteins in the transition milk. Recommendations from Dr. Sandra Godden suggest that the best practices of heat treatment for colostrum to be 140°F (60°C) for 60 minutes because of the IgG and high solids content. At Miner Institute we've also heat-treated transition milk following recommendations for colostrum because of the higher solids content.

After four days of age, the calves were fed and managed similarly and body weights, blood samples, and health scores were measured throughout the preweaning period. Calves that were fed both the transition milk and the 50:50 mixture had an increased body weight of 6.6 lb (3 kg) at the end of the preweaning

period compared to the milk replacer group. The calves fed only milk replacer gained 1.23 lb/d (0.56 kg/d), while calves fed the transition milk and 50:50 mixture gained 1.37 lb/d (0.62 kg/d).

The different energy density between the diets fed from day 2 through 4 accounts for some but not all the difference in gain.

The authors estimated that the additional nutrients consumed by calves fed the transition milk and the 50:50 mixture would account for 2.84 lb (1.29 kg) of the gain for calves fed the transition milk, and (1.26 lb) 0.57 kg for the colostrum replacer mixture. Therefore, the difference between growth among the treatments would have been residual effects after the treatments ended on day 4 of age. There were no differences in health, with overall incidence of disease very low in all groups. Colostrum and transition milk have been shown to promote the maturation of the intestine, increase absorptive capacity and digestive efficiency. Therefore, some of the difference observed from feeding transition milk or colostrum replacer could be from the other bioactives and their action on development.

We continue to learn more on this topic; however, it seems like there are beneficial effects of feeding transition milk to calves in the first couple of days after colostrum feeding. As with colostrum, it's important to feed clean transition milk that is free of contamination either through heat treatment or good hygiene techniques.

— Sarah Morrison
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NEW RESEARCH INTERN AT MINER INSTITUTE

Growing up on a dairy farm in Cortland, NY, I've witnessed the struggles and triumphs that come with dairy farming. My family currently milks 600 Holstein and Jersey cows, and new projects are constantly in the works, ranging from building new barns to adding whey to the feed. Watching my parents and grandparents pour their passion into the farm is the inspiration for how I approach life and work. My name is Julia Fouts, and I'm the current year-long research intern at Miner Institute.



Last May I graduated from Cornell University with a B.S. in Animal Science. My early college experiences include interning at my county's Soil and Water Conservation District and spending a summer on a calf ranch in Wisconsin. During my time at Cornell I completed a research trial in Dr. Michael Van Amburgh's lab studying rumen-protected amino acids and their effects on nitrogen-use efficiency in dairy cattle. I also studied abroad in The Netherlands, where I visited the world's first floating dairy farm (I encourage you to look it up if you haven't heard of it!). Joining the Cornell University Dairy Science Club allowed me to tour and study farms in California, Italy, and China. Believe it or not, the trip to California was the most

eye-opening, mostly due to the shortage of water and the sense of urgency to comply with upcoming environmental regulations. My experiences have instilled a passion in me to contribute to the environmental sustainability of dairy farming.

Leaving college and entering the work force in the year of 2020 was more interesting and tumultuous than I could have ever imagined. I'm grateful for the opportunity to work at Miner Institute and learn from knowledgeable and collaborative people. During this past summer, I worked in both the environmental

and dairy science research groups. Right now, my focus is on helping with a study that is analyzing the effects of a feed additive designed for immune support throughout the transition period. I'm enjoying every minute of it, and I know Miner Institute is preparing me well for the next step in my life.

After my internship I plan to either return to my home farm or attend graduate school to study nutritional strategies for reducing greenhouse gas emissions. Working in agriculture in the 21st century presents several challenges, including extreme weather events and the pressure to reduce emissions and runoff. If I continue in research, I plan to help create management strategies that

help farmers address these issues. If I decide to return home and farm, I'll work to follow my dad's mentality of thinking progressively and building towards positive change. Choosing to work in the agricultural world in a time of economic, climatic and social hardship may be seen as inopportune, but I disagree. This is the time to learn. This is the time for resiliency, for telling the world about what we do, and for creating innovative approaches towards a better future.

— Julia Fouts
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ANOTHER WARM BOTTLE: A “SECOND HELPING” OF INFORMATION ON HEAT-TREATED COLOSTRUM

As cooler weather sets in and the leaves begin to turn, we start to think about “sweater season” and, perhaps even more importantly, “soup season”. The nip in the air invites thoughts of warm, hearty meals, and there are few things more inviting than a steaming bowl of soup on a chilly day. While the health benefits of a warm bowl of soup are anecdotal at best for humans (although homemade chicken noodle soup from one particular restaurant in my home region is my sworn go-to for kicking a cold), research continues to explore the impact of heat-treated colostrum on calf health. In fact, companion articles from Cornell University recently published in the *Journal of Dairy Science* provide new information on how heat treatment may affect other essential immunological components of colostrum and their contribution to calf development.

Colostrum management on farms is one area where cleanliness and quality are imperative. It’s important to give the calf a good foundation for her immune system. High bacterial content in colostrum leads to a decrease in available immunoglobulin G (IgG), which lowers the amount available for absorption in the calf. Gut maturation and development are also supported by other complement components present in colostrum, such as growth factors, cytokines, hormones, enzymes, insulin, and insulin growth factor I (IGF-I). Many of these components and their mechanisms in colostrum have been understudied, but advancements in proteomics are allowing for further exploration of these components and their roles in immune and gut development. While it’s well-documented that heat treatment reduces bacterial count and preserves

IgG fractions, these two studies further explored what effects heat treatment may have on these other essential components and subsequent impact on the calf’s health and development.

First-milking colostrum from 11 Holstein cows, of which the average Brix percentage was 27%, were collected on one commercial dairy in New York State. Colostrum from each cow was collected 3x over one day post-parturition, homogenized, and divided into two 4-L (1 gallon) bags for a total of 22 paired batches. One bag was placed on ice for 30 min, then stored at 4°C (39° F) for up to 24 h. The second bag was heat treated at 60°C (140° F) for 60 min immediately after filling, placed on ice for 30 min, then stored at 4° C for up to 24 h. Samples from the raw and heat treated colostrum batches were analyzed for somatic cell count (SCC), bacterial contamination, IgG, IgA, complement components, proteins, insulin, and IGF-I. As exhibited in previous work, the heat treatment considerably improved the hygiene of the colostrum. Average SCC of the 11 raw colostrum samples was 470,000 (range 300,000-1,300,000); heat treatment reduced this count by 207,000 ± 68,000, or 36%, in comparison to their raw counterparts. Heat treatment also reduced bacterial counts by 93% in comparison to raw colostrum.

However, heat treatment reduced IgA (which is crucial to development of mucous membranes) by 8.5% when compared to raw colostrum, and reduced IgG by 6.6%. Heat treatment also decreased insulin by 22%, and IGF-I by 10.2%. A total of 328 distinct complement proteins were identified in

the colostrum samples, many of which were decreased by heat treatment. While they may not be found in high concentrations, the presence of these complement components are important to the development of the neonatal immune system. The authors then sought to determine if whether or not a reduction in abundance of these components also translated to a biological impairment, or a reduction in their circulating concentrations.

Twenty-two Holstein calves were enrolled to be fed either the raw (R, n =11) or heat treated (H, n=11) colostrum at 8.5% of their body weight (0.87 and 0.91 gallons, respectively). Colostrum was placed in a 43°C (104° F) water bath for 20 min to warm to feeding temperature, and fed to calves within 1 hour of birth via an esophageal feeder. None of the calves received colostrum from their own dam. Calves were moved to a group pen (20 calves/pen) 8 h after feeding, where free-choice, heat-treated milk was offered ad libitum, and calves were treated similarly for the remainder of the preweaning period. Blood samples were collected from each calf immediately before colostrum feeding, and at 4, 8 and 24 h after feeding. Weaning weights were collected at a targeted 64 d.

Calves in both groups demonstrated successful passive transfer of antibodies, with serum IgG concentrations above 10 mg/mL. Weaning weights and average daily gain did not differ between the R and H groups, nor did the levels of serum IgA and IgG 24 h after feeding, despite the reduction of both by heat treatment. Insulin levels peaked at 4 h,

See **COLOSTRUM**, Page 7

SOUTHERN GIRL IN A NORTHEAST WORLD

My name is Emily Fread, and I am a new graduate student at Miner Institute. I grew up near Charlotte, NC, and graduated from North Carolina State University with a Bachelor's degree in Animal Science in May. I was a summer student at Miner Institute in 2018 and am very happy to be back in this new role!

Unlike many professionals I've met in the dairy industry, I did not grow up around agriculture. I spent a lot of my childhood at a quarter-mile racetrack, supporting my dad and brother and their passion for cars. Growing up, I always thought that I would become a veterinarian, mainly because I did not know that other jobs within Animal Science existed. It wasn't until I got to college and started showing dairy cattle at the State Fair that I realized that there are many more opportunities to explore.

For my Master's project I'll be focusing on dry cow heat stress and in-utero heat stress. We've chosen to focus on dry animals and their offspring for this study because heat stress hasn't been documented as well in dry cows as compared to lactating animals. Research has shown that heat stress with a lack of heat abatement in the dry period will lead to decreased milk production in the subsequent lactation. A recent study conducted by the University of Florida compiled 10 years of heat stress data to look at the daughters and granddaughters of dams that experienced heat stress during the dry period. This study showed that dry period heat stress has a



Emily measures wind speed in a dairy cow pen at Miner Institute as part of her research study.

carry-over effect for two generations. The daughters of these heat-stressed dams had reduced milk production in their first three lactations, while the granddaughters had reduced milk production during their first lactation.

During my time here it's been interesting to note differences in the heat stress behavior of cattle (and humans) in the North Country compared with the southern U.S. Hot, humid weather is consistent during summer months in Florida, while the northern U.S. experiences more episodic bouts of heat. Research has shown that it takes weeks for dairy cattle to acclimate to this episodic

heat stress and that the effects of a bout of heat stress last for days after the actual heat event. A study from the University of Florida used weather data from different regions to estimate milk losses and financial impacts in each state. They found that cows experiencing heat stress during their dry period with no heat abatement in NY resulted in a loss of 387 kg (853 lbs.) of milk in their subsequent lactation, which equates to approximately \$75/cow/year. The economic impacts of heat stress in these animals may be greater than estimated as these animals may not have a chance to acclimate to the heat. This economic impact may also increase as we continue to experience warmer summers.

This past summer we began collecting data related to this topic at Miner Institute and at a farm in Vermont, with hopes to enroll more farms in the study next year. By enrolling multiple farms we'll be able to look at different forms of heat abatement. Heat abatement strategies vary widely among producers, and many farms in the Northern U.S. do not invest in heat abatement systems for their dry cows. Hopefully, we'll determine the most appropriate and cost-effective heat abatement strategy for dry cows in Northern NY. In my short time back at the Institute I've already learned so much, and I know these next two years of experience will be invaluable for my future career in the dairy industry.

— Emily Fread
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WEATHER VS. CLIMATE

Look out your window: Whatever it's doing out there — rain, sunshine, etc. — is the *weather*. Climate is the long-term average of weather conditions, typically over a period of 30 years. Weather records show that over the past 30 years our climate has changed: Our growing season is a few days longer and annual precipitation is slightly higher, particularly during the fall. And these changes appear to be happening more rapidly, enough so

that “climate” may more accurately be defined as the average of the past 15 years of weather, not 30.

We've recently finished one of the hottest summers in memory, with the result that a lot of corn was ready to chop for silage in August. Some farmers routinely plant a modest acreage of corn of a maturity that's later than recommended for their area. I have no problem with this practice as long as “modest” is 5-10% of corn

acreage, not 50%. This corn may have hit a home run this year, but while this summer's weather was unusually warm, there hasn't been a meaningful change in climate from one year to the next. The 2021 growing season has about an equal chance of being cooler than normal than it does of being warmer. Think about this as you order seed corn for 2021.

— E.T.

POTASH PAYS

Alfalfa is a heavy user of potassium, but corn silage also uses a lot of this essential nutrient. Now is a good time to review your soil analyses with a focus on alfalfa fields but also on any corn fields harvested for silage that don't get regular manure applications. The price of potash fertilizer is the lowest it's been since 2016; this is what's known as a “buying opportunity”. Potash fertilizer doesn't volatilize and (unlike nitrogen and phosphorus) it isn't considered an environmental threat. So there's no reason to delay or postpone potash applications. It may be too late for enough potassium uptake by alfalfa roots to impact winter survival, but at least it will be there at “green-up” next spring. Application of K in the fertilizer band may be enough for some corn fields, but high yields of corn silage may remove more K than can be conveniently or safely applied at planting. Your crop consultant or nutrient management planner should be able to help in making these decisions.

— E.T.

COLOSTRUM, Continued from Page 5

but differed at 8 h as decline in insulin in group H was slower than that of group R. No differences in IGF-I were detected between groups. Insulin and IGF-I concentrations were of particular interest to the researchers due to the observed reductions in the heat-treated colostrum. 663 unique proteins were also identified in serum samples; a large number of these were noted to have changed in abundance between the 0 and 8 h timepoints, suggesting a change in the calf proteome following colostrum feeding. Of those serum proteins that

were increased in abundance, 41% were also identified in the colostrum samples, and were classified as those involved in immune response and coagulation. These results suggest that many of these immunological factors are present in colostrum and help contribute to the establishment of the neonate immune system, and that lowered abundance in the heat-treated batches did not translate to diminished uptake or effect.

While more investigation of the calf proteome and the effects of heat

treatment on complement components of the immune system is still necessary, this research continues to support the method of heat treatment for preservation of colostrum quality. Enhancing our understanding of these complement components and proteins, as well as their roles in development, will provide more opportunities to optimize calf health through management and nutrition strategies. Bring on the cold weather, and bring on those warm bottles!

— Cari Reynolds
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Learn more about Miner Institute's equine program, visit www.whminer.org/equine/



PICKING A WINNER – CONSIDERATIONS FOR NEXT YEAR’S CORN HYBRIDS

Corn may be off the fields, but now is not the time to forget about this year’s corn crop. If you tracked truck weights or counted loads during harvest, now is the time to total them up and estimate yield/acre for each field. This will give you useful information about the productivity of each of your fields, but it can also help you to decide what to plant next spring. If you grew multiple hybrids and each



hybrid was planted on two or more fields, calculating the average yield for each hybrid could give you a pretty good on-farm comparison. Visual differences are sometimes apparent but can be deceiving when comparing hybrids. If you do see differences, ask yourself why and consider what agronomic traits might have contributed to these differences. Look back at the description of each hybrid and see if the strengths of each hybrid made a difference on your farm.

Picking a corn hybrid can be a lot like betting on a horse or investing in the stock market. The winner one year may very well lose for the next two. That is why I typically recommend that a farm plant several hybrids and spread the risk out. Putting your eggs in one basket is never a good idea; especially when it comes to next year’s forage supply. The fact is: our growing seasons are different

every year and there is absolutely no way to predict what type of growing conditions we will have next year. If you’re looking at local variety trials, always interpret the results in relation to the growing environment at the experimental station for that year. Joe Lawrence from Cornell University plants hundreds of corn plots across New York and Vermont each year with the goal of comparing silage yield and quality, but rarely does he find consistency across years or locations.

Does it even matter what corn hybrid you choose if growing conditions are so unpredictable? While some would argue that it doesn’t, most agronomists agree that selecting good genetics is crucial to a successful corn crop each year. You can never be sure that you picked the perfect hybrids, but the goal is to pick a few that will perform strongly as a whole

across a variety of growing conditions.

While forage quality is extremely important for silage hybrids, I usually don’t recommend selecting hybrids based on their forage quality characteristics alone. There are few genetic differences in conventional corn hybrids that are reliably linked to improved forage quality. I am always amazed at how a small yield difference can outweigh

the slight quality differences that are typically seen between hybrids. Focusing on traditional agronomic traits and plant health characteristics will generally result in the highest profitability per acre with minimal lost quality potential if the corn is harvested and stored properly. Some traits, such as disease resistance, will likely improve both yield and quality.

If a higher quality corn silage is needed on the farm, consider growing a brown midrib (BMR) hybrid and storing it separately, rather than placing your hopes in conventional corn. BMR consistently shows higher digestibility than conventional corn and can allow you to maximize your high-producing animals without sacrificing the resilience of your corn crop as a whole.

– Allen Wilder
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DAIRY DAY AT MINER INSTITUTE

VIRTUAL EVENT ONLY

Tuesday December 8, 2020

View this event from the comfort of your computer, at home!

The Dairy Day program will begin at **11 a.m.** and will wrap up around **2 p.m.**, End time will be dependent upon engagement/participation from the audience!

You can submit questions for the program speakers to: Emerich@whminer.com

Dairy Day Speakers:

- Corey Geiger, Managing Editor Hoard's Dairyman
Dairy demand during the pandemic and beyond
 - Katie Ballard, Miner Institute
Heat Stress in Northern NY? What the Cows are Telling US
 - Dr. Heather Dann, Miner Institute
Tips to Achieving Success with Your Transition Cows
 - Dr. Rick Grant, Miner Institute
Managing for More Milk Components: Focus on Feed and Feeding Experience
- Dr. Sarah Morrison, Miner Institute

For updates on this virtual event please contact:

Wanda Emerich at emerich@whminer.com or 518-846-7121, ext. 117



WHAT'S HAPPENING ON THE FARM

Where has the time gone? On October 28th I will have been working at the Miner Institute dairy for exactly one year. It truly has been a whirlwind of a year but I've definitely learned a lot about managing a dairy herd. Having said that, a manager is only as good as the employees that complete the day-to-day tasks to keep the dairy running smoothly. So, I owe a big thank you to all of the hard-working employees of the Miner Institute dairy, for without them the cows and replacement heifers would not be fed, milked or cared for on a daily basis. Although we are milking just over 400 cows, which in this day and age is considered a small to medium size dairy, the technology available such as the SCR system, which monitors individual cow health and reproductive status by tracking rumination and activity levels on an hourly basis, or the BouMatic leg transponders, which among other data captures daily milk weights on individual cow, allows us to personally care for each and every cow on the dairy.

In last month's *Farm Report*, Trina Bigelow, our new Dairy Management Intern, mentioned that we finally put cows in the new addition of the dairy barn. The addition is 144 sand-bedded stalls in a four-row configuration with access to 192 individual headlocks at the feed bunk. The barn was



constructed to easily allow our research department to replace the headlocks with individual Calan Bins to conduct valuable nutritional research, and our research department is wasting no time in utilizing the space as the first Calan Bins are being installed later this month. From the commercial side of the operation, the addition finally allows us the needed space to establish a true fresh cow/heifer pen. The fresh pen has 24 bedded stalls with access to 32 individual headlocks at the feed bunk. Our goal is to keep the stocking density of the fresh group at or below 100% capacity of the free stalls and definitely less than 80% capacity of the head locks. We can achieve this by moving these fresh cows into

the high group within the first 10-21 days of lactation. It's been just over a month and I can already see the value this true fresh pen will add to the health and productivity of the herd.

On the replacement heifer side of the dairy, Bethann and her calf crew continue to do an excellent job of raising the dairy heifer replacements. Bethann just invited Dr. Chris Rossiter, veterinarian with Poulin Grain, to the dairy to review and update our newborn calf protocols. As our dairy cow numbers grow ever so slightly, having everyone tuned into newborn calf health management will be extremely important to the future health and productivity of the herd.

The crops department is just about finished bringing in the 2020 feed inventory. The only thing they have left is one last cutting of grass haylage. In the meantime, they are busy spreading manure and preparing the fields for the long winter ahead of us.

It has truly been a great first year at the Institute and I look forward to many more years with this exceptional group of farm employees who I now call my friends.

— Kevin Tobey, DVM
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SAVE THE DATE!

THE VERMONT DAIRY PRODUCERS CONFERENCE IS TUESDAY, FEB. 23, 2021

*** Registration opens in January.**

Speakers for the 2021 program include:

- Dr. Adam Lock, Michigan State University discussing diet manipulation to increase fat and protein production from dairy cows and the important role of milk fat consumption on human health.
- Dr. Victor E. Cabrera, University of Wisconsin-Madison will deliver a talk about dairy farm efficiency with an emphasis on reproduction.
- Cheryl Jones, University of Kentucky, formerly from Toyota, will focus on lean systems, bringing efficiencies to business.
 - Dr. Frank Mitloehner, University of California Davis will cover topics including cows and climate change.
- Dr Shannon Ferrell, Oklahoma State, will cover farm business transition and Coach Tom Wall share his thoughts on employee management and on-farm leadership.



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Closing Comment

Polish proverb: A noisy cow gives little milk.

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